

SEQUENCE LISTING

<110> TAKEDA, NAOKAZU
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MIYAMURA, TATSUO
KAMATA, KUNIO
SATO, TOSHINORI
SATO, SEIYA

<120> Detection Kit for SRSV

<130> 217039US0XPCT

<140> 09/926,799

<141> 2000-12-20

<150> JP 11175928

<151> 1999-06-22

<150> JP 11-175928

<151> 1999-06-22

<160> 34

<170> PatentIn version 3.1

<210> 1

<211> 545

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNETHETIC PEPTIDE

<400> 1

Met Met Met Ala Ser Lys Asp Ala Pro Thr Asn Met Asp Gly Thr Ser
1 5 10 15

Gly Ala Gly Gln Leu Val Pro Glu Ala Asn Thr Ala Glu Pro Ile Ser
20 25 30

Met Glu Pro Val Ala Gly Ala Ala Thr Ala Ala Ala Thr Ala Gly Gln
35 40 45

Val Asn Met Ile Asp Pro Trp Ile Met Asn Asn Tyr Val Gln Ala Pro
50 55 60

Gln Gly Glu Phe Thr Ile Ser Pro Asn Asn Thr Pro Gly Asp Ile Leu
65 70 75 80

Phe Asp Leu Gln Leu Gly Pro His Leu Asn Pro Phe Leu Ser His Leu

85								90				95			
Ala	Gln	Met	Tyr	Asn	Gly	Trp	Val	Gly	Asn	Met	Lys	Val	Lys	Val	Leu
			100							105				110	
Leu	Ala	Gly	Asn	Ala	Phe	Thr	Ala	Gly	Lys	Ile	Ile	Ile	Ser	Cys	Ile
		115					120					125			
Pro	Pro	Gly	Phe	Ala	Ala	Gln	Asn	Ile	Ser	Ile	Ala	Gln	Ala	Thr	Met
	130					135					140				
Phe	Pro	His	Val	Ile	Ala	Asp	Val	Arg	Val	Leu	Glu	Pro	Ile	Glu	Val
145					150					155					160
Pro	Leu	Glu	Asp	Val	Arg	Asn	Val	Leu	Phe	His	Asn	Asn	Asp	Asn	Ala
			165						170					175	
Pro	Thr	Met	Arg	Leu	Val	Cys	Met	Leu	Tyr	Thr	Pro	Leu	Arg	Ala	Ser
		180						185					190		
Gly	Ser	Ser	Ser	Gly	Thr	Asp	Pro	Phe	Val	Ile	Ala	Gly	Arg	Val	Leu
	195						200					205			
Thr	Cys	Pro	Ser	Pro	Asp	Phe	Ser	Phe	Leu	Phe	Leu	Val	Pro	Pro	Asn
	210					215					220				
Val	Glu	Gln	Lys	Thr	Lys	Pro	Phe	Ser	Val	Pro	Asn	Leu	Pro	Leu	Asn
225					230					235					240
Thr	Leu	Ser	Asn	Ser	Arg	Val	Pro	Ser	Leu	Ile	Lys	Ser	Met	Met	Val
			245						250					255	
Ser	Arg	Asp	His	Gly	Gln	Met	Val	Gln	Phe	Gln	Asn	Gly	Arg	Val	Thr
			260						265				270		
Leu	Asp	Gly	Gln	Leu	Gln	Gly	Thr	Thr	Pro	Thr	Ser	Ala	Ser	Gln	Leu
	275						280					285			
Cys	Lys	Ile	Arg	Gly	Ser	Val	Phe	His	Ala	Asn	Gly	Gly	Asn	Gly	Tyr
	290					295					300				
Asn	Leu	Thr	Glu	Leu	Asp	Gly	Ser	Pro	Tyr	His	Ala	Phe	Glu	Ser	Pro
305					310					315					320

Ala Pro Ile Gly Phe Pro Asp Leu Gly Glu Cys Asp Trp His Met Glu
325 330 335

Ala Ser Pro Thr Thr Gln Phe Asn Thr Gly Asp Val Ile Lys Gln Ile
340 345 350

Asn Val Lys Gln Glu Ser Ala Phe Ala Pro His Leu Gly Thr Ile Gln
355 360 365

Ala Asp Gly Leu Ser Asp Val Ser Val Asn Thr Asn Met Ile Ala Lys
370 375 380

Leu Gly Trp Val Ser Pro Val Ser Asp Gly His Arg Gly Asp Val Asp
385 390 395 400

Pro Trp Val Ile Pro Arg Tyr Gly Ser Thr Leu Thr Glu Ala Ala Gln
405 410 415

Leu Ala Pro Pro Ile Tyr Pro Pro Gly Phe Gly Glu Ala Ile Val Phe
420 425 430

Phe Met Ser Asp Phe Pro Ile Ala His Gly Thr Asn Gly Leu Ser Val
435 440 445

Pro Cys Thr Ile Pro Gln Glu Phe Val Thr His Phe Val Asn Glu Gln
450 455 460

Ala Pro Thr Arg Gly Glu Ala Ala Leu Leu His Tyr Leu Asp Pro Asp
465 470 475 480

Thr His Arg Asn Leu Gly Glu Phe Lys Leu Tyr Pro Glu Gly Phe Met
485 490 495

Thr Cys Val Pro Asn Ser Ser Gly Thr Gly Pro Gln Thr Leu Pro Ile
500 505 510

Asn Gly Val Phe Val Phe Val Ser Trp Val Ser Arg Phe Tyr Gln Leu
515 520 525

Lys Pro Val Gly Thr Ala Gly Pro Ala Cys Arg Leu Gly Ile Arg Arg
530 535 540

Ser
545

<210> 2
<211> 530
<212> PRT
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 2

Met Met Met Ala Ser Lys Asp Ala Thr Ser Ser Val Asp Gly Ala Ser
1 5 10 15

Gly Ala Gly Gln Leu Val Pro Glu Val Asn Ala Ser Asp Pro Leu Ala
20 25 30

Met Asp Pro Val Ala Gly Ser Ser Thr Ala Val Ala Thr Ala Gly Gln
35 40 45

Val Asn Pro Ile Asp Pro Trp Ile Ile Asn Asn Phe Val Gln Ala Pro
50 55 60

Gln Gly Glu Phe Thr Ile Ser Pro Asn Asn Thr Pro Gly Gly Val Leu
65 70 75 80

Phe Asp Leu Ser Leu Gly Pro His Leu Asn Pro Phe Leu Leu His Leu
85 90 95

Ser Gln Met Tyr Asn Gly Trp Val Gly Asn Met Arg Val Arg Ile Met
100 105 110

Leu Ala Gly Asn Ala Phe Thr Ala Gly Lys Ile Ile Val Ser Cys Ile
115 120 125

Pro Pro Gly Phe Gly Ser His Asn Leu Thr Ile Ala Gln Ala Thr Leu
130 135 140

Phe Pro His Val Ile Ala Asp Val Arg Thr Leu Asp Pro Ile Glu Val
145 150 155 160

Pro Leu Glu Asp Val Arg Asn Val Leu Phe His Asn Asn Asp Arg Asn
165 170 175

Gln Gln Thr Met Arg Leu Val Cys Met Leu Tyr Thr Pro Leu Arg Thr
 180 185 190

Gly Gly Gly Thr Gly Asp Ser Phe Val Val Ala Gly Arg Val Met Thr
 195 200 205

Cys Pro Ser Pro Asp Phe Asn Phe Leu Phe Leu Val Pro Pro Thr Val
 210 215 220

Glu Gln Lys Thr Arg Pro Phe Thr Leu Pro Asn Leu Pro Leu Ser Ser
 225 230 235 240

Leu Ser Asn Ser Arg Ala Pro Leu Pro Ile Ser Gly Met Gly Ile Ser
 245 250 255

Pro Asp Asn Val Gln Ser Val Gln Phe Gln Asn Gly Arg Cys Thr Leu
 260 265 270

Asp Gly Arg Leu Val Gly Thr Thr Pro Val Ser Leu Ser His Val Ala
 275 280 285

Lys Ile Arg Gly Thr Ser Asn Gly Thr Val Ile Asn Leu Thr Glu Leu
 290 295 300

Asp Gly Thr Pro Phe His Pro Phe Glu Gly Pro Ala Pro Ile Gly Phe
 305 310 315 320

Pro Asp Leu Gly Gly Cys Asp Trp His Ile Asn Met Thr Gln Phe Gly
 325 330 335

His Ser Ser Gln Thr Gln Tyr Asp Val Asp Thr Thr Pro Asp Thr Phe
 340 345 350

Val Pro His Leu Gly Ser Ile Gln Ala Asn Gly Ile Gly Ser Gly Asn
 355 360 365

Tyr Ile Gly Val Leu Ser Trp Val Ser Pro Pro Ser His Pro Ser Gly
 370 375 380

Ser Gln Val Asp Leu Trp Lys Ile Pro Asn Tyr Gly Ser Ser Ile Thr
 385 390 395 400

Glu Ala Thr His Leu Ala Pro Ser Val Tyr Pro Pro Gly Phe Gly Glu
 405 410 415

Val Leu Val Phe Phe Met Ser Lys Ile Pro Gly Pro Gly Ala Tyr Ser
 420 425 430

Leu Pro Cys Leu Leu Pro Gln Glu Tyr Ile Ser His Leu Ala Ser Glu
 435 440 445

Gln Ala Pro Thr Val Gly Glu Ala Ala Leu Leu His Tyr Val Asp Pro
 450 455 460

Asp Thr Gly Arg Thr Leu Gly Glu Phe Lys Ala Tyr Pro Asp Gly Phe
 465 470 475 480

Leu Thr Cys Val Pro Asn Gly Ala Ser Ser Gly Pro Gln Gln Leu Pro
 485 490 495

Ile Asn Gly Val Phe Val Phe Val Ser Trp Val Ser Arg Phe Tyr Gln
 500 505 510

Leu Lys Pro Val Gly Thr Ala Ser Ser Ala Arg Gly Arg Leu Gly Leu
 515 520 525

Arg Arg
 530

<210> 3
 <211> 546
 <212> PRT
 <213> ARTIFICIAL SEQUENCE

<220>
 <223> SYNTHETIC PEPTIDE

<400> 3

Met Met Met Ala Ser Lys Asp Ala Pro Gln Ser Ala Asp Gly Ala Ser
 1 5 10 15

Gly Ala Gly Gln Leu Val Pro Glu Val Asn Thr Ala Asp Pro Leu Pro
 20 25 30

Met Glu Pro Val Ala Gly Pro Thr Thr Ala Val Ala Thr Ala Gly Gln
 35 40 45

Val Asn Met Ile Asp Pro Trp Ile Val Asn Asn Phe Val Gln Ser Pro
50 55 60

Gln Gly Glu Phe Thr Ile Ser Pro Asn Asn Thr Pro Gly Asp Ile Leu
65 70 75 80

Phe Asp Leu Gln Leu Gly Pro His Leu Asn Pro Phe Leu Ser His Leu
85 90 95

Ser Gln Met Tyr Asn Gly Trp Val Gly Asn Met Arg Val Arg Ile Leu
100 105 110

Leu Ala Gly Asn Ala Phe Ser Ala Gly Lys Ile Ile Val Cys Cys Val
115 120 125

Pro Pro Gly Phe Thr Ser Ser Ser Leu Thr Ile Ala Gln Ala Thr Leu
130 135 140

Phe Pro His Val Ile Ala Asp Val Arg Thr Leu Glu Pro Ile Glu Met
145 150 155 160

Pro Leu Glu Asp Val Arg Asn Val Leu Tyr His Thr Asn Asp Asn Gln
165 170 175

Pro Thr Met Arg Leu Val Cys Met Leu Tyr Thr Pro Leu Arg Thr Gly
180 185 190

Gly Gly Ser Gly Asn Ser Asp Ser Phe Val Val Ala Gly Arg Val Leu
195 200 205

Thr Ala Pro Ser Ser Asp Phe Ser Phe Leu Phe Leu Val Pro Pro Thr
210 215 220

Ile Glu Gln Lys Thr Arg Ala Phe Thr Val Pro Asn Ile Pro Leu Gln
225 230 235 240

Thr Leu Ser Asn Ser Arg Phe Pro Ser Leu Ile Gln Gly Met Ile Leu
245 250 255

Ser Pro Asp Ala Ser Gln Val Val Gln Phe Gln Asn Gly Arg Cys Leu
260 265 270

Ile Asp Gly Gln Leu Leu Gly Thr Thr Pro Ala Thr Ser Gly Gln Leu
 275 280 285

Phe Arg Val Arg Gly Lys Ile Asn Gln Gly Ala Arg Thr Leu Asn Leu
 290 295 300

Thr Glu Val Asp Gly Lys Pro Phe Met Ala Phe Asp Ser Pro Ala Pro
 305 310 315 320

Val Gly Phe Pro Asp Phe Gly Lys Cys Asp Trp His Met Arg Ile Ser
 325 330 335

Lys Thr Pro Asn Asn Thr Ser Ser Gly Asp Pro Met Arg Ser Val Ser
 340 345 350

Val Gln Thr Asn Val Gln Gly Phe Val Pro His Leu Gly Ser Ile Gln
 355 360 365

Phe Asp Glu Val Phe Asn His Pro Thr Gly Asp Tyr Ile Gly Thr Ile
 370 375 380

Glu Trp Ile Ser Gln Pro Ser Thr Pro Pro Gly Thr Asp Ile Asn Leu
 385 390 395 400

Trp Glu Ile Pro Asp Tyr Gly Ser Ser Leu Ser Gln Ala Ala Asn Leu
 405 410 415

Ala Pro Pro Val Phe Pro Pro Gly Phe Gly Glu Ala Leu Val Tyr Phe
 420 425 430

Val Ser Ala Phe Pro Gly Pro Asn Asn Arg Ser Ala Pro Asn Asp Val
 435 440 445

Pro Cys Leu Leu Pro Gln Glu Tyr Ile Thr His Phe Val Ser Glu Gln
 450 455 460

Ala Pro Thr Met Gly Asp Ala Ala Leu Leu His Tyr Val Asp Pro Asp
 465 470 475 480

Thr Asn Arg Asn Leu Gly Glu Phe Lys Leu Tyr Pro Gly Gly Tyr Leu
 485 490 495

Thr Cys Val Pro Asn Gly Val Gly Ala Gly Pro Gln Gln Leu Pro Leu
500 505 510

Asn Gly Val Phe Leu Phe Val Ser Trp Val Ser Arg Phe Tyr Gln Leu
515 520 525

Lys Pro Val Gly Thr Ala Ser Thr Ala Arg Ser Arg Leu Gly Val Arg
530 535 540

Arg Ile
545

<210> 4
<211> 544
<212> PRT
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 4

Met Met Met Ala Ser Lys Asp Ala Thr Pro Ser Ala Asp Gly Ala Thr
1 5 10 15

Gly Ala Gly Gln Leu Val Pro Glu Val Asn Thr Ala Asp Pro Ile Pro
20 25 30

Ile Asp Pro Val Ala Gly Ser Ser Thr Ala Leu Ala Thr Ala Gly Gln
35 40 45

Val Asn Leu Ile Asp Pro Trp Ile Ile Asn Asn Phe Val Gln Ala Pro
50 55 60

Gln Gly Glu Phe Thr Ile Ser Pro Asn Asn Thr Pro Gly Asp Val Leu
65 70 75 80

Phe Asp Leu Gln Leu Gly Pro His Leu Asn Pro Phe Leu Ser His Leu
85 90 95

Ser Gln Met Tyr Asn Gly Trp Val Gly Asn Met Arg Val Arg Val Val
100 105 110

Leu Ala Gly Asn Ala Phe Thr Ala Gly Lys Val Ile Ile Cys Cys Val
115 120 125

Pro Pro Gly Phe Gln Ser Arg Thr Leu Ser Ile Ala Gln Ala Thr Leu
 130 135 140

Phe Pro His Val Ile Ala Asp Val Arg Thr Leu Asp Pro Val Glu Val
 145 150 155 160

Pro Leu Glu Asp Val Arg Asn Val Leu Tyr His Asn Asn Asp Thr Gln
 165 170 175

Pro Thr Met Arg Leu Leu Cys Met Leu Tyr Thr Pro Leu Arg Thr Gly
 180 185 190

Gly Ala Ser Gly Gly Thr Asp Ser Phe Val Val Ala Gly Arg Val Leu
 195 200 205

Thr Cys Pro Gly Pro Asp Phe Asn Phe Leu Phe Leu Val Pro Pro Thr
 210 215 220

Val Glu Gln Lys Thr Arg Pro Phe Thr Val Pro Asn Ile Pro Leu Lys
 225 230 235 240

Tyr Leu Ser Asn Ser Arg Ile Pro Asn Pro Ile Glu Gly Met Ser Leu
 245 250 255

Ser Pro Asp Gln Thr Gln Asn Val Gln Phe Gln Asn Gly Arg Cys Thr
 260 265 270

Ile Asp Gly Gln Pro Leu Gly Thr Thr Pro Val Ser Val Ser Gln Leu
 275 280 285

Cys Lys Phe Arg Gly Arg Ile Thr Ser Gly Gln Arg Val Leu Asn Leu
 290 295 300

Thr Glu Leu Asp Gly Ser Pro Phe Met Ala Phe Ala Ala Pro Ala Pro
 305 310 315 320

Ala Gly Phe Pro Asp Leu Gly Ser Cys Asp Trp His Ile Glu Met Ser
 325 330 335

Lys Ile Pro Asn Ser Ser Thr Gln Asn Asn Pro Ile Val Thr Asn Ser
 340 345 350

Val Lys Pro Asn Ser Gln Gln Phe Val Pro His Leu Ser Ser Ile Thr
 355 360 365

Leu Asp Glu Asn Val Ser Ser Gly Gly Asp Tyr Ile Gly Thr Ile Gln
 370 375 380

Trp Thr Ser Pro Pro Ser Asp Ser Gly Gly Ala Asn Thr Asn Phe Trp
 385 390 395 400

Lys Ile Pro Asp Tyr Gly Ser Ser Leu Ala Glu Ala Ser Gln Leu Ala
 405 410 415

Pro Ala Val Tyr Pro Pro Gly Phe Asn Glu Val Ile Val Tyr Phe Met
 420 425 430

Ala Ser Ile Pro Gly Pro Asn Gln Ser Gly Ser Pro Asn Leu Val Pro
 435 440 445

Cys Leu Leu Pro Gln Glu Tyr Ile Thr His Phe Ile Ser Glu Gln Ala
 450 455 460

Pro Ile Gln Gly Glu Ala Ala Leu Leu His Tyr Val Asp Pro Asp Thr
 465 470 475 480

Asn Arg Asn Leu Gly Glu Phe Lys Leu Tyr Pro Gly Gly Tyr Leu Thr
 485 490 495

Cys Val Pro Asn Ser Ser Ser Thr Gly Pro Gln Gln Leu Pro Leu Asp
 500 505 510

Gly Val Phe Val Phe Ala Ser Trp Val Ser Arg Phe Tyr Gln Leu Lys
 515 520 525

Pro Val Gly Thr Ala Gly Pro Ala Arg Gly Arg Leu Gly Val Arg Arg
 530 535 540

<210> 5

<211> 539

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC PEPTIDE

<400> 5

Met Lys Met Ala Ser Asn Asp Ala Asn Pro Ser Asp Gly Ser Thr Ala
 1 5 10 15
 Asn Leu Val Pro Glu Val Asn Asn Glu Val Met Ala Leu Glu Pro Val
 20 25 30
 Val Gly Ala Ala Ile Ala Ala Pro Val Ala Gly Gln Gln Asn Val Ile
 35 40 45
 Asp Pro Trp Ile Arg Asn Asn Phe Val Gln Ala Pro Gly Gly Glu Phe
 50 55 60
 Thr Val Ser Pro Arg Asn Ala Pro Gly Glu Ile Leu Trp Ser Ala Pro
 65 70 75 80
 Leu Gly Pro Asp Leu Asn Pro Tyr Leu Ser His Leu Ala Arg Met Tyr
 85 90 95
 Asn Gly Tyr Ala Gly Gly Phe Glu Val Gln Val Ile Leu Ala Gly Asn
 100 105 110
 Ala Phe Thr Ala Gly Lys Ile Ile Phe Ala Ala Val Pro Pro Asn Phe
 115 120 125
 Pro Thr Glu Gly Leu Ser Pro Ser Gln Val Thr Met Phe Pro His Ile
 130 135 140
 Ile Val Asp Val Arg Gln Leu Glu Pro Val Leu Ile Pro Leu Pro Asp
 145 150 155 160
 Val Arg Asn Asn Phe Tyr His Tyr Asn Gln Ser Asn Asp Ser Thr Ile
 165 170 175
 Lys Leu Ile Ala Met Leu Tyr Thr Pro Leu Arg Ala Asn Asn Ala Gly
 180 185 190
 Asp Asp Val Phe Thr Val Ser Cys Arg Val Leu Thr Arg Pro Ser Pro
 195 200 205
 Asp Phe Asp Phe Ile Phe Leu Val Pro Pro Thr Val Glu Ser Arg Thr
 210 215 220

Lys Pro Phe Thr Val Pro Ile Leu Thr Val Glu Glu Met Ser Asn Ser
 225 230 235 240

Arg Phe Pro Ile Pro Leu Glu Lys Leu Tyr Thr Gly Pro Ser Ser Ala
 245 250 255

Phe Val Val Gln Pro Gln Asn Gly Arg Cys Thr Thr Asp Gly Val Leu
 260 265 270

Leu Gly Thr Thr Gln Leu Ser Ala Val Asn Ile Cys Thr Phe Arg Gly
 275 280 285

Asp Val Thr His Ile Ala Gly Ser His Asp Tyr Thr Met Asn Leu Ala
 290 295 300

Ser Gln Asn Trp Ser Asn Tyr Asp Pro Thr Glu Glu Ile Pro Ala Pro
 305 310 315 320

Leu Gly Thr Pro Asp Phe Val Gly Lys Ile Gln Gly Met Leu Thr Gln
 325 330 335

Thr Thr Arg Glu Asp Gly Ser Thr Arg Ala His Lys Ala Thr Val Ser
 340 345 350

Thr Gly Ser Val His Phe Thr Pro Lys Leu Gly Ser Val Gln Tyr Thr
 355 360 365

Thr Asp Thr Asn Asn Asp Phe Gln Thr Gly Gln Asn Thr Lys Phe Thr
 370 375 380

Pro Val Gly Val Ile Gln Asp Gly Asn Asn His Gln Asn Glu Pro Gln
 385 390 395 400

Gln Trp Val Leu Pro Asn Tyr Ser Gly Arg Thr Gly His Asn Val His
 405 410 415

Leu Ala Pro Ala Val Ala Pro Thr Phe Pro Gly Glu Gln Leu Leu Phe
 420 425 430

Phe Arg Ser Thr Met Pro Gly Cys Ser Gly Tyr Pro Asn Met Asn Leu
 435 440 445

Asp Cys Leu Leu Pro Gln Glu Trp Val Gln His Phe Cys Gln Glu Ala

450 455 460
 Ala Pro Ala Gln Ser Asp Val Ala Leu Leu Arg Phe Val Asn Pro Asp
 465 470 475 480
 Thr Gly Arg Val Leu Phe Glu Cys Lys Leu His Lys Ser Gly Tyr Val
 485 490 495
 Thr Val Ala His Thr Gly Pro His Asp Leu Val Ile Pro Pro Asn Gly
 500 505 510
 Tyr Phe Arg Phe Asp Ser Trp Val Asn Gln Phe Tyr Thr Leu Ala Pro
 515 520 525
 Met Gly Asn Gly Ala Gly Arg Arg Arg Ala Leu
 530 535

 <210> 6
 <211> 548
 <212> PRT
 <213> ARTIFICIAL SEQUENCE

 <220>
 <223> SYNTHETIC PEPTIDE

 <400> 6
 Met Lys Met Ala Ser Asn Asp Ala Ala Pro Ser Asn Asp Gly Ala Ala
 1 5 10 15
 Gly Leu Val Pro Glu Ile Asn Asn Glu Ala Met Ala Leu Asp Pro Val
 20 25 30
 Ala Gly Ala Ala Ile Ala Ala Pro Leu Thr Gly Gln Gln Asn Ile Ile
 35 40 45
 Asp Pro Trp Ile Met Asn Asn Phe Val Gln Ala Pro Gly Gly Glu Phe
 50 55 60
 Thr Val Ser Pro Arg Asn Ser Pro Gly Glu Val Leu Leu Asn Leu Glu
 65 70 75 80
 Leu Gly Pro Glu Ile Asn Pro Tyr Leu Ala His Leu Ala Arg Met Tyr
 85 90 95

Asn Gly Tyr Ala Gly Gly Phe Glu Val Gln Val Val Leu Ala Gly Asn
 100 105 110

Ala Phe Thr Ala Gly Lys Ile Ile Phe Ala Ala Ile Pro Pro Asn Phe
 115 120 125

Pro Ile Asp Asn Leu Ser Ala Ala Gln Ile Thr Met Cys Pro His Val
 130 135 140

Ile Val Asp Val Arg Gln Leu Glu Pro Val Asn Leu Pro Met Pro Asp
 145 150 155 160

Val Arg Asn Asn Phe Phe His Tyr Asn Gln Gly Ser Asp Ser Arg Leu
 165 170 175

Arg Leu Ile Ala Met Leu Tyr Thr Pro Leu Arg Ala Asn Asn Ser Gly
 180 185 190

Asp Asp Val Phe Thr Val Ser Cys Arg Val Leu Thr Arg Pro Ser Pro
 195 200 205

Asp Phe Ser Phe Asn Phe Leu Val Pro Pro Thr Val Glu Ser Lys Thr
 210 215 220

Lys Pro Phe Thr Leu Pro Ile Leu Thr Ile Ser Glu Met Ser Asn Ser
 225 230 235 240

Arg Phe Pro Val Pro Ile Glu Ser Leu His Thr Ser Pro Thr Glu Asn
 245 250 255

Ile Val Val Gln Cys Gln Asn Gly Arg Val Thr Leu Asp Gly Glu Leu
 260 265 270

Met Gly Thr Thr Gln Leu Leu Pro Ser Gln Ile Cys Ala Phe Arg Gly
 275 280 285

Val Leu Thr Arg Ser Thr Ser Arg Ala Ser Asp Gln Ala Asp Thr Ala
 290 295 300

Thr Pro Arg Leu Phe Asn Tyr Tyr Trp His Val Gln Leu Asp Asn Leu
 305 310 315 320

Asn Gly Thr Pro Tyr Asp Pro Ala Glu Asp Ile Pro Gly Pro Leu Gly

	325		330		335										
Thr	Pro	Asp	Phe	Arg	Gly	Lys	Val	Phe	Gly	Val	Ala	Ser	Gln	Arg	Asn
			340					345					350		
Leu	Asp	Ser	Thr	Thr	Arg	Ala	His	Glu	Ala	Lys	Val	Asp	Thr	Thr	Ala
		355					360					365			
Gly	Arg	Phe	Thr	Pro	Lys	Leu	Gly	Ser	Leu	Glu	Ile	Ser	Thr	Asp	Ser
	370					375					380				
Asp	Asp	Phe	Asp	Gln	Asn	Gln	Pro	Thr	Lys	Phe	Thr	Pro	Val	Gly	Ile
385					390					395					400
Gly	Val	Asp	Asn	Glu	Ala	Glu	Phe	Gln	Gln	Trp	Ser	Leu	Pro	Asp	Tyr
			405						410					415	
Ser	Gly	Gln	Phe	Thr	His	Asn	Met	Asn	Leu	Ala	Pro	Ala	Val	Ala	Pro
		420						425					430		
Asn	Phe	Pro	Gly	Glu	Gln	Leu	Leu	Phe	Phe	Arg	Ser	Gln	Leu	Pro	Ser
		435					440					445			
Ser	Gly	Gly	Arg	Ser	Asn	Gly	Val	Leu	Asp	Cys	Leu	Val	Pro	Gln	Glu
	450					455					460				
Trp	Val	Gln	His	Phe	Tyr	Gln	Glu	Ser	Ala	Pro	Ala	Gln	Thr	Gln	Val
465					470					475					480
Ala	Leu	Val	Arg	Tyr	Val	Asn	Pro	Asp	Thr	Gly	Lys	Val	Leu	Phe	Glu
			485						490					495	
Ala	Lys	Leu	His	Lys	Leu	Gly	Phe	Met	Thr	Ile	Ala	Asn	Asn	Gly	Asp
			500					505					510		
Ser	Pro	Ile	Thr	Val	Pro	Pro	Asn	Gly	Tyr	Phe	Arg	Phe	Glu	Ser	Trp
		515					520					525			
Val	Asn	Pro	Phe	Tyr	Thr	Leu	Ala	Pro	Met	Gly	Thr	Gly	Asn	Gly	Arg
	530					535					540				
Arg	Arg	Ile	Gln												
545															

<210> 7
<211> 540
<212> PRT
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 7

Met Lys Met Ala Ser Asn Asp Ala Thr Pro Ser Asn Asp Gly Ala Ala
1 5 10 15

Gly Leu Val Pro Glu Ser Asn Asn Glu Ala Met Ala Leu Glu Pro Val
20 25 30

Val Gly Ala Ser Leu Ala Ala Pro Val Thr Gly Gln Thr Asn Ile Ile
35 40 45

Asp Pro Trp Ile Arg Thr Asn Phe Val Gln Ala Pro Asn Gly Glu Phe
50 55 60

Thr Val Ser Pro Arg Asn Ser Pro Gly Glu Ile Leu Val Asn Leu Glu
65 70 75 80

Leu Gly Pro Glu Leu Asn Pro Tyr Leu Ala His Leu Ala Arg Met Tyr
85 90 95

Asn Gly Tyr Ala Gly Gly Met Glu Val Gln Val Met Leu Ala Gly Asn
100 105 110

Ala Phe Thr Ala Gly Lys Ile Ile Phe Ala Ala Val Pro Pro Tyr Phe
115 120 125

Pro Val Glu Asn Leu Ser Pro Ser Gln Ile Thr Met Phe Pro His Val
130 135 140

Ile Ile Asp Val Arg Thr Leu Glu Pro Val Leu Leu Pro Met Pro Asp
145 150 155 160

Val Arg Ser Thr Leu Phe His Phe Asn Gln Lys Asp Glu Pro Lys Met
165 170 175

Arg Leu Val Ala Met Leu Tyr Thr Pro Leu Arg Ser Asn Gly Ser Gly

180	185	190
Asp Asp Val Phe Thr Val Ser Cys Arg Ile Leu Thr Arg Pro Ser Pro 195 200 205		
Glu Phe Asp Phe Thr Tyr Leu Val Pro Pro Thr Val Glu Ser Lys Thr 210 215 220		
Lys Pro Phe Thr Leu Pro Val Leu Thr Leu Gly Glu Leu Ser Asn Ser 225 230 235 240		
Arg Phe Pro Leu Ser Ile Asp Glu Met Val Thr Ser Pro Asn Glu Ser 245 250 255		
Ile Val Val Gln Pro Gln Asn Gly Arg Val Thr Leu Asp Gly Glu Leu 260 265 270		
Leu Gly Thr Thr Gln Leu Gln Ala Cys Asn Ile Cys Ser Ile Arg Gly 275 280 285		
Lys Val Thr Gly Gln Val Pro Ser Glu Gln His Met Trp Asn Leu Glu 290 295 300		
Ile Thr Asn Leu Asn Gly Thr Gln Phe Asp Pro Thr Asp Asp Val Pro 305 310 315 320		
Ala Pro Leu Gly Val Pro Asp Phe Ala Gly Glu Val Phe Gly Val Leu 325 330 335		
Ser Gln Arg Asn Arg Gly Glu Ser Asn Pro Ala Asn Arg Ala His Asp 340 345 350		
Ala Val Val Ala Thr Tyr Ser Asp Lys Tyr Thr Pro Lys Leu Gly Leu 355 360 365		
Val Gln Ile Gly Thr Trp Asn Thr Asn Asp Val Glu Asn Gln Pro Thr 370 375 380		
Lys Phe Thr Pro Ile Gly Leu Asn Glu Val Ala Asn Gly His Arg Phe 385 390 395 400		
Glu Gln Trp Thr Leu Pro Arg Tyr Ser Gly Ala Leu Thr Leu Asn Met 405 410 415		

Asn Leu Ala Pro Ala Val Ala Pro Leu Phe Pro Gly Glu Arg Leu Leu
420 425 430

Phe Phe Arg Ser Tyr Val Pro Leu Lys Gly Gly Phe Gly Asn Pro Ala
435 440 445

Ile Asp Cys Ser Val Pro Gln Glu Trp Val Gln His Phe Tyr Gln Glu
450 455 460

Ser Ala Pro Ser Leu Gly Asp Val Ala Leu Val Arg Tyr Val Asn Pro
465 470 475 480

Asp Thr Gly Arg Val Leu Phe Glu Ala Lys Leu His Lys Gly Gly Phe
485 490 495

Leu Thr Val Ser Ser Thr Ser Thr Gly Pro Val Val Val Pro Ala Asn
500 505 510

Gly Tyr Phe Lys Phe Asp Ser Trp Val Asn Gln Phe Tyr Ser Leu Ala
515 520 525

Pro Met Gly Thr Gly Asn Gly Arg Arg Arg Val Gln
530 535 540

<210> 8
<211> 535
<212> PRT
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 8

Met Lys Met Ala Ser Asn Asp Ala Ala Pro Ser Asn Asp Gly Ala Ala
1 5 10 15

Gly Leu Val Pro Glu Ala Asn Asn Glu Thr Met Ala Leu Glu Pro Val
20 25 30

Ala Gly Ala Ser Ile Ala Ala Pro Leu Thr Gly Gln Asn Asn Ile Ile
35 40 45

Asp Pro Trp Ile Arg Leu Asn Phe Val Gln Ala Pro Asn Gly Glu Phe

50	55	60
Thr Val Ser Pro Arg Asn Ser Pro Gly Glu Val Leu Leu Asn Leu Glu		
65	70	75 80
Leu Gly Pro Glu Leu Asn Pro Tyr Leu Ala His Leu Ser Arg Met Tyr		
	85	90 95
Asn Gly Tyr Ala Gly Gly Val Glu Val Gln Val Leu Leu Ala Gly Asn		
	100	105 110
Ala Phe Thr Ala Gly Lys Leu Val Phe Ala Ala Val Pro Pro His Phe		
	115	120 125
Pro Leu Glu Asn Ile Ser Pro Gly Gln Ile Thr Met Phe Pro His Val		
	130	135 140
Ile Ile Asp Val Arg Thr Leu Glu Pro Val Leu Leu Pro Leu Pro Asp		
145	150	155 160
Val Arg Asn Asn Phe Phe His Tyr Asn Gln Gln Asn Glu Pro Arg Met		
	165	170 175
Arg Leu Val Ala Met Leu Tyr Thr Pro Leu Arg Ser Asn Gly Ser Gly		
	180	185 190
Asp Asp Val Phe Thr Val Ser Cys Arg Val Leu Thr Arg Pro Ser Pro		
	195	200 205
Asp Phe Asp Phe Asn Tyr Leu Val Pro Pro Thr Leu Glu Ser Lys Thr		
	210	215 220
Lys Pro Phe Thr Leu Pro Ile Leu Thr Ile Gly Glu Leu Thr Asn Ser		
225	230	235 240
Arg Phe Pro Val Pro Ile Asp Glu Leu Tyr Thr Ser Pro Asn Glu Ser		
	245	250 255
Leu Val Val Gln Pro Gln Asn Gly Arg Cys Ala Leu Asp Gly Glu Leu		
	260	265 270
Gln Gly Thr Thr Gln Leu Leu Pro Thr Ala Ile Cys Ser Phe Arg Gly		
	275	280 285

Arg Ile Asn Gln Lys Val Ser Gly Glu Asn His Val Trp Asn Met Gln
 290 295 300

Val Thr Asn Ile Asn Gly Thr Pro Phe Asp Pro Thr Gly Asp Val Pro
 305 310 315 320

Ala Pro Leu Gly Thr Pro Asp Phe Ser Gly Lys Leu Phe Gly Val Leu
 325 330 335

Ser Gln Arg Asp His Asp Asn Ala Cys Arg Ser His Asp Ala Val Ile
 340 345 350

Ala Thr Asn Ser Ala Lys Phe Thr Pro Lys Leu Gly Ala Ile Gln Ile
 355 360 365

Gly Thr Trp Glu Glu Asp Asp Val His Ile Asn Gln Pro Thr Lys Phe
 370 375 380

Thr Pro Val Gly Leu Phe Glu Asn Glu Gly Phe Asn Gln Trp Thr Leu
 385 390 395 400

Pro Asn Tyr Ser Gly Ala Leu Thr Leu Asn Met Gly Leu Ala Pro Pro
 405 410 415

Val Ala Pro Thr Phe Pro Gly Glu Gln Ile Leu Phe Phe Arg Ser His
 420 425 430

Ile Pro Leu Lys Gly Gly Val Ala Asp Pro Val Ile Asp Cys Leu Leu
 435 440 445

Pro Gln Glu Trp Ile Gln His Leu Tyr Gln Glu Ser Ala Pro Ser Gln
 450 455 460

Ser Asp Val Ala Leu Ile Arg Phe Thr Asn Pro Asp Thr Gly Arg Val
 465 470 475 480

Leu Phe Glu Ala Lys Leu His Arg Ser Gly Tyr Ile Thr Val Ala Asn
 485 490 495

Thr Gly Ser Arg Pro Ile Val Val Pro Ala Asn Gly Tyr Phe Arg Phe
 500 505 510

Asp Thr Trp Val Asn Gln Phe Tyr Ser Leu Ala Pro Met Gly Thr Gly
515 520 525

Asn Gly Arg Arg Arg Val Gln
530 535

<210> 9
<211> 542
<212> PRT
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 9

Met Lys Met Ala Ser Asn Asp Ala Ala Pro Ser Asn Asp Gly Ala Ala
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Ser Leu Val Pro Glu Gly Ile Asn Glu Thr Met Pro Leu Glu Pro Val
20 25 30

Ala Gly Ala Ser Ile Ala Ala Pro Val Ala Gly Gln Thr Asn Ile Ile
35 40 45

Asp Pro Trp Ile Arg Thr Asn Phe Val Gln Ala Pro Asn Gly Glu Phe
50 55 60

Thr Val Ser Pro Arg Asn Ser Pro Gly Glu Ile Leu Leu Asn Leu Glu
65 70 75 80

Leu Gly Pro Asp Leu Asn Pro Tyr Leu Ala His Leu Ser Arg Met Tyr
85 90 95

Asn Gly Tyr Ala Gly Gly Val Glu Val Gln Val Leu Leu Ala Gly Asn
100 105 110

Ala Phe Thr Ala Gly Lys Ile Leu Phe Ala Ala Ile Pro Pro Asn Phe
115 120 125

Leu Val Asp Met Ile Ser Pro Ala Gln Ile Thr Met Leu Pro His Leu
130 135 140

Ile Val Asp Val Arg Thr Leu Glu Pro Ile Met Thr Pro Leu Pro Asp
145 150 155 160

Val Arg Asn Val Phe Tyr His Phe Asn Asn Gln Pro Gln Pro Arg Met
 165 170 175

Arg Leu Val Ala Met Leu Tyr Thr Pro Leu Arg Ser Asn Gly Ser Gly
 180 185 190

Asp Asp Val Phe Thr Val Ser Cys Arg Val Leu Thr Arg Pro Thr Pro
 195 200 205

Asp Phe Glu Phe Ile Tyr Leu Val Pro Pro Ser Val Glu Ser Lys Thr
 210 215 220

Lys Pro Phe Thr Leu Pro Ile Leu Thr Ile Ser Glu Leu Thr Asn Ser
 225 230 235 240

Arg Phe Pro Ile Pro Ile Glu Gln Leu Tyr Thr Ala Pro Asn Glu Thr
 245 250 255

Asn Val Val Gln Cys Gln Asn Gly Arg Cys Thr Leu Asp Gly Glu Leu
 260 265 270

Gln Gly Thr Thr Gln Leu Leu Ser Ser Ala Val Cys Phe Leu Gln Gly
 275 280 285

Arg Thr Val Ala Asp Asn Gly Asp Asn Trp Asp Gln Asn Leu Leu Gln
 290 295 300

Leu Thr Tyr Pro Asn Gly Ala Ser Tyr Asp Pro Thr Asp Glu Val Pro
 305 310 315 320

Ala Pro Leu Gly Thr Gln Asp Phe Ser Gly Met Leu Tyr Gly Val Leu
 325 330 335

Thr Gln Asp Asn Val Asn Val Ser Thr Gly Glu Ala Lys Asn Ala Lys
 340 345 350

Gly Ile Tyr Ile Ser Thr Thr Ser Gly Lys Phe Thr Pro Lys Ile Gly
 355 360 365

Ser Ile Gly Leu His Ser Ile Thr Glu His Val His Pro Asn Gln Gln
 370 375 380

Ser Arg Phe Thr Pro Val Gly Val Ala Val Asp Glu Asn Thr Pro Phe
385 390 395 400

Gln Gln Trp Val Leu Pro His Tyr Ala Gly Ser Leu Ala Leu Asn Thr
405 410 415

Asn Leu Ala Pro Ala Val Ala Pro Thr Phe Pro Gly Glu Gln Leu Leu
420 425 430

Phe Phe Arg Ser Arg Val Pro Cys Val Gln Gly Leu Gln Gly Gln Asp
435 440 445

Ala Phe Ile Asp Cys Leu Leu Pro Gln Glu Trp Val Asn His Phe Tyr
450 455 460

Gln Glu Ala Ala Pro Ser Gln Ala Asp Val Ala Leu Ile Arg Tyr Val
465 470 475 480

Asn Pro Asp Thr Gly Arg Thr Leu Phe Glu Ala Lys Leu His Arg Ser
485 490 495

Gly Phe Ile Thr Val Ser His Thr Gly Ala Tyr Pro Leu Val Val Pro
500 505 510

Pro Asn Gly His Phe Arg Phe Asp Ser Trp Val Asn Gln Phe Tyr Ser
515 520 525

Leu Ala Pro Met Gly Thr Gly Asn Gly Arg Arg Arg Ile Gln
530 535 540

<210> 10
<211> 550
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<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 10

Met Lys Met Ala Ser Asn Asp Ala Ala Pro Ser Asn Asp Gly Ala Ala
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Asn Leu Val Pro Glu Ala Asn Asp Glu Val Met Ala Leu Glu Pro Val
20 25 30

Val Gly Ala Ser Ile Ala Ala Pro Val Val Gly Gln Gln Asn Ile Ile
 35 40 45

Asp Pro Trp Ile Arg Glu Asn Phe Val Gln Ala Pro Gln Gly Glu Phe
 50 55 60

Thr Val Ser Pro Arg Asn Ser Pro Gly Glu Met Leu Leu Asn Leu Glu
 65 70 75 80

Leu Gly Pro Glu Leu Asn Pro Tyr Leu Ser His Leu Ser Arg Met Tyr
 85 90 95

Asn Gly Tyr Ala Gly Gly Met Gln Val Gln Val Val Leu Ala Gly Asn
 100 105 110

Ala Phe Thr Ala Gly Lys Ile Ile Phe Ala Ala Val Pro Pro His Phe
 115 120 125

Pro Val Glu Asn Ile Ser Ala Ala Gln Ile Thr Met Cys Pro His Val
 130 135 140

Ile Val Asp Val Arg Gln Leu Glu Pro Val Leu Leu Pro Leu Pro Asp
 145 150 155 160

Ile Arg Asn Arg Phe Phe His Tyr Asn Gln Glu Asn Thr Pro Arg Met
 165 170 175

Arg Leu Val Ala Met Leu Tyr Thr Pro Leu Arg Ala Asn Ser Gly Glu
 180 185 190

Asp Val Phe Thr Val Ser Cys Arg Val Leu Thr Arg Pro Ala Pro Asp
 195 200 205

Phe Glu Phe Thr Phe Leu Val Pro Pro Thr Val Glu Ser Lys Thr Lys
 210 215 220

Pro Phe Thr Leu Pro Ile Leu Thr Leu Gly Glu Leu Ser Asn Ser Arg
 225 230 235 240

Phe Pro Ala Ala Ile Asp Met Leu Tyr Thr Asp Pro Asn Glu Ser Ile
 245 250 255

Val Val Gln Pro Gln Asn Gly Arg Cys Thr Leu Asp Gly Thr Leu Gln
260 265 270

Gly Thr Thr Gln Leu Val Pro Thr Gln Ile Cys Ala Phe Arg Gly Thr
275 280 285

Leu Ile Ser Gln Thr Ala Arg Ala Ala Asp Ser Thr Asp Ser Pro Gln
290 295 300

Arg Ala Arg Asn His Pro Leu His Val Gln Val Lys Asn Leu Asp Gly
305 310 315 320

Thr Gln Tyr Asp Pro Thr Asp Asp Ile Pro Ala Val Leu Gly Ala Ile
325 330 335

Asp Phe Lys Gly Thr Val Phe Gly Val Ala Ser Gln Arg Asp Val Ser
340 345 350

Gly Gln Gln Glu Gln Gly His Tyr Ala Thr Arg Ala His Glu Ala His
355 360 365

Ile Asp Thr Thr Asp Pro Lys Tyr Ala Pro Lys Leu Gly Thr Ile Leu
370 375 380

Ile Lys Ser Gly Ser Asp Asp Phe Asn Thr Asn Gln Pro Ile Arg Phe
385 390 395 400

Thr Pro Val Gly Met Gly Asp Asn Asn Trp Arg Gln Trp Glu Leu Pro
405 410 415

Asp Tyr Ser Gly Arg Leu Thr Leu Asn Met Asn Leu Ala Pro Ala Val
420 425 430

Ser Pro Ser Phe Pro Gly Glu Arg Ile Leu Phe Phe Arg Ser Ile Val
435 440 445

Pro Ser Ala Gly Gly Tyr Gly Ser Gly Tyr Ile Asp Cys Leu Ile Pro
450 455 460

Gln Glu Trp Val Gln His Phe Tyr Gln Glu Ala Ala Pro Ser Gln Ser
465 470 475 480

Ala Val Ala Leu Val Arg Tyr Val Asn Pro Asp Thr Gly Arg Asn Ile
485 490 495

Phe Glu Ala Lys Leu His Arg Glu Gly Phe Leu Thr Val Ala Asn Cys
500 505 510

Gly Asn Asn Pro Ile Val Val Pro Pro Asn Gly Tyr Phe Arg Phe Glu
515 520 525

Ala Trp Gly Asn Gln Phe Tyr Thr Leu Ala Pro Met Gly Ser Gly Gln
530 535 540

Gly Arg Arg Arg Ala Gln
545 550

<210> 11
<211> 541
<212> PRT
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC PEPTIDE

<400> 11

Met Lys Met Ala Ser Asn Asp Ala Ala Pro Ser Ser Asp Gly Ala Ala
1 5 10 15

Gly Leu Val Pro Glu Ile Asn Asn Glu Val Met Pro Leu Glu Pro Val
20 25 30

Ala Gly Ala Ser Leu Ala Thr Pro Val Val Gly Gln Gln Asn Ile Ile
35 40 45

Asp Pro Trp Ile Arg Asn Asn Phe Val Gln Ala Pro Ala Gly Glu Phe
50 55 60

Thr Val Ser Pro Arg Asn Ser Pro Gly Glu Ile Leu Leu Asp Leu Glu
65 70 75 80

Leu Gly Pro Asp Leu Asn Pro Tyr Leu Ala His Leu Ala Arg Met Tyr
85 90 95

Asn Gly His Ala Gly Gly Met Glu Val Gln Ile Val Leu Ala Gly Asn
100 105 110

Ala Phe Thr Ala Gly Lys Ile Ile Phe Ala Ala Ile Pro Pro Gly Phe
 115 120 125

Pro Tyr Glu Asn Leu Ser Pro Ser Gln Ile Thr Met Cys Pro His Val
 130 135 140

Ile Ile Asp Val Arg Gln Leu Glu Pro Phe Leu Leu Pro Met Pro Asp
 145 150 155 160

Ile Trp Asn Asn Phe Phe His Tyr Asn Gln Gly Asn Asp Pro Lys Leu
 165 170 175

Arg Leu Val Ala Met Leu Tyr Thr Pro Leu Arg Ala Asn Asn Ser Gly
 180 185 190

Asp Asp Val Phe Thr Val Ser Cys Arg Val Leu Thr Lys Pro Ser Pro
 195 200 205

Asp Phe Glu Phe Thr Phe Leu Val Pro Pro Thr Val Glu Ser Lys Thr
 210 215 220

Lys Gln Phe Ala Leu Pro Ile Leu Lys Ile Ser Glu Met Thr Asn Ser
 225 230 235 240

Arg Phe Pro Val Pro Val Asp Val Met Tyr Thr Ala Arg Asn Glu Asn
 245 250 255

Gln Val Val Gln Pro Gln Asn Gly Arg Val Thr Leu Asp Gly Glu Leu
 260 265 270

Leu Gly Thr Thr Pro Leu Leu Ala Val Asn Ile Cys Lys Phe Lys Gly
 275 280 285

Glu Val Ile Ala Lys Asn Gly Asp Val Arg Ser Tyr Arg Met Asp Met
 290 295 300

Glu Ile Thr Asn Thr Asp Gly Thr Pro Ile Asp Pro Thr Glu Asp Thr
 305 310 315 320

Pro Gly Pro Ile Gly Ser Pro Asp Phe Gln Gly Ile Leu Phe Gly Val
 325 330 335

Ala Ser Gln Arg Asn Lys Asn Glu Gln Asn Pro Ala Thr Arg Ala His
340 345 350

Glu Ala Ile Ile Asn Thr Gly Gly Asp His Leu Cys Pro Gln Ile Ser
355 360 365

Ser Ser Glu Ile Tyr Leu Thr Ser Pro Asn Ile Leu Arg Cys Thr Asn
370 375 380

Pro Gln Pro Leu Pro Gln Ser Gly Leu Arg Gly Thr Ile Leu Ile Arg
385 390 395 400

Ser Asp Asn Gly His Cys His Asp Met Val Gly Thr Ser Pro Thr Thr
405 410 415

Pro Thr Trp Pro Gln Gln Trp Arg Arg Cys Ser Arg Gly Ser Asn Cys
420 425 430

Cys Ser Ser Gly His Arg Tyr Pro Val Pro Val Val Met Asn Arg Val
435 440 445

Thr Trp Ile Val Leu Ser His Lys Ser Gly Phe Ser Thr Ser Thr Arg
450 455 460

Lys Leu Pro Gln Leu Asn Leu Arg Trp Pro Leu Ile Arg Phe Ile Asn
465 470 475 480

Pro Asp Thr Gly Arg Val Leu Phe Glu Ala Arg Leu His Lys Gln Gly
485 490 495

Phe Ile Thr Val Ala His Thr Gly Asp Asn Pro Ile Val Met Pro Pro
500 505 510

Asn Gly Tyr Phe Arg Phe Glu Ala Trp Val Asn Gln Phe Tyr Ser Leu
515 520 525

Ala Pro Val Gly Thr Gly Lys Gly Arg Arg Arg Val Gln
530 535 540

<210> 12

<211> 1638

<212> DNA

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC DNA

<400> 12

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acagctgccg caaccgctgg ccaagttaat atgattgacc cctggataat gaataattat      180
gtgcaagccc ctcaaggtga atttaccata tcgcctaata acacaccagg tgatattttg      240
tttgatctac aattaggccc tcatctcaat cctttcttat cccatttggc ccaaattgtat      300
aacggttggg ttggcaatat gaaagtgaag gtcctattgg ctggtaatgc cttcacggct      360
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1638

<210> 13

<211> 1593

<212> DNA

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC DNA

<400> 13

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 <212> DNA
 <213> ARTIFICIAL SEQUENCE

<220>
 <223> SYNTHETIC DNA

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<210> 15
 <211> 1635
 <212> DNA
 <213> ARTIFICIAL SEQUENCE

<220>
 <223> SYNTHETIC DNA

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 aatgggttggg tgggcaacat gcgagtgcgt gttgtcttgg ctggtaatgc tttcacggct 360
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 ctectttgca tgtgttacac tcctctccgc accggggggag cgtctgggtg gactgattct 600
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 <212> DNA
 <213> ARTIFICIAL SEQUENCE

<220>
 <223> SYNTHETIC DNA

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cgagtcctca cgaggccatc ccccgatttt gatttcatat tcttgggtgcc acccacagtt	660
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<211> 1647

<212> DNA

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<220>

<223> SYNTHETIC DNA

<400> 17

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ctcactgggtc agcaaaacat aattgatccc tggattatga ataattttgt gcaagcacct	180
gggtggtgagt ttacagtgtc ccctaggaat tcccctgggtg aagtgttct taatttggaa	240
ttggggccag aaataaaccc ttatttggcc catcttgcta gaatgtataa tggttatgca	300
gggtgatttg aagtgcagggt ggtcctgggt gggaatgcgt tcacagcagg aaagataatc	360

tttgcagcta taccacctaa ttttccaatt gataatctga gcgcagcaca aatcactatg	420
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gttcgcaaca atttctttca ttacaatcaa gggctctgatt cgcgattgcg cttaattgca	540
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 <213> ARTIFICIAL SEQUENCE

<220>
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gtcactggcc aaactaatat aatagacccc tggattagaa ctaattttgt ccaagcccc	180
aatggtgaat ttacagtttc ccctagaaat tcccctggag agatattggt caatttggag	240
ttgggtccag aactgaaccc ttatctggca catttagcta ggatgtacaa tggttatgcg	300
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 <212> DNA

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC DNA

<400> 19

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ttaggccccg	aactaaatcc	atacctagca	cacctttcta	gaatgtataa	tggttatgca	300
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gttaggaata	atttctttca	ttataatcag	cagaatgaac	cgaggatgag	actcgtagca	540
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 <211> 1629
 <212> DNA
 <213> ARTIFICIAL SEQUENCE

<220>
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attcagtaa 1629

<210> 21
<211> 1653
<212> DNA
<213> ARTIFICIAL SEQUENCE

<220>
<223> SYNTHETIC DNA

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<210> 22

<211> 1626

<212> DNA

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC DNA

<400> 22

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<220>
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<210> 24
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<220>
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<400> 24	
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<210> 25
 <211> 24

<212> DNA
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 <400> 25
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 <210> 26
 <211> 20
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 <220>
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 <400> 26
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 <400> 27
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 <400> 28
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 <400> 29
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<210> 30
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<220>
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<400> 30
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22

<210> 31
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<400> 31
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22